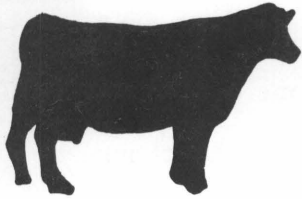


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# Dairy guidelines

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BLACKSBURG, VIRGINIA  
PREVENTING ANTIBIOTIC RESIDUES IN  
MILK AND CULL DAIRY COWS

Rebecca J. Prewett - Extension Assistant, Managed Milking  
G. M. Jones, Extension Specialist, Dairy Management

What would you do if antibiotics for treatment of mastitis, intrauterine infections, etc., were no longer available? This could, and very likely will, happen if dairymen continue to misuse antibiotics. Now's the time to consider the problem while antibiotics are still available.

The Food and Drug Administration will accept no residue from antibiotics in milk or meat. And what's more, FDA is using a more sensitive test that can detect an antibiotic from one quarter although this milk has been diluted in the tank by milk from many cows. Your milk is checked by the milk plant and by the Virginia Bureau of Dairy Services because:

1. A small percentage of people are violently allergic to antibiotics. Extremely small doses can be fatal.
2. A continued low-level intake of antibiotics from food could result in a buildup of antibiotic-resistant organisms in humans who are not allergic to the drug.

Preventing antibiotic contamination of milk and meat is not difficult when a well planned drug use program is followed. Remember that there is no way that your milk plant can use contaminated milk.

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Guidelines for an Effective Drug Use Program

1. Read the label when the antibiotic is purchased. It is the responsibility of the dairyman to understand and follow directions for usage of all prescriptions and over-the-counter drugs. Make sure that anyone who handles drugs on your farm understands their usage and consequences of misuse.
2. Administer the drug properly. Always clean the teat end or injection site with alcohol. Be sure to use a sterile cannula, if they aren't included with the drug. No medication can do the job right if you inject more germs and contaminants along with the drug. After infusing the udder, remember to use teat dip to help sanitize the teat ends against additional bacterial invasion.
3. Pay attention to withdrawal time notices for milk and for cows to be slaughtered. Withdrawal times are not the same for all drugs.

<u>Active ingredients</u>	<u>Slaughter withdrawal (days)</u>	<u>Milk discard (hours)</u>
Erythromycin (injectable)	14	72
Procaine penicillin G (mammary)	3	60
Procaine penicillin G and dihydrostreptomycin (mammary)	60 days after treatment, or 4 days postpartum, whichever is longer	96

If you use a prescription drug from your veterinarian, be sure that you understand the directions for use and withdrawal times.

- (a) Withhold milk from cows treated for intrauterine infections or other diseases. These drugs can reach the udder and be detected in milk.
- (b) Do not ship dry cows to slaughter, if treated at drying off with an intra-mammary product, until the withdrawal time for meat has elapsed.

- (c) Milking cows which are culled because they are unresponsive to mastitis and other treatments cannot be shipped until the withdrawal time for meat has expired. Remember carcasses can show needle marks.
4. Mark and identify all treated cows. With expanding herd sizes and different milkers, it is necessary to identify all treated cows for detection by any milker and the days which milk must be withheld. Separate treated cows from the herd and milk them last as an additional precaution to avoid a tank full of contaminated milk. Accurate observation of the withholding period requires identification at the time of treatment. A good method, which is not infallible, is to mark treated cows with baling twine, neck chains, or special tags over existing numbers; crayons, spray paint or purple dye on the udder, flanks, legs or rumps; tape, baling twine or plastic bracelets on tails or legs; or special leg or tail tags which have space for entering the date and time when milk can be saved or cows can be slaughtered. Keep a written record on all treatments, including date of treatment, treatment used, and withholding times.
5. Withhold milk from all four quarters of a treated cow. Antibiotic infused into one quarter can reach all other quarters through the blood stream.
6. Do not exceed recommended dosage levels. A double dosage does not double the effectiveness. Administer treatment for as many times as indicated by the directions. Get specific recommendations from your veterinarian regarding treatment.
7. Do not combine several antibiotics yourself. "Home-brewed" concoctions can become contaminated by infectious organisms in the milk house. Withdrawal times would not be known.

8. If medicated feeds are used on the farm, always follow the feeding and withholding instructions. Be careful that these feeds do not contaminate the feed or water supply of the milking herd.
9. Store all antibiotics and other drugs properly. Many drugs require cool storage and keeping them in a windowsill or on top of the water heater can make the product impotent. At best they will be ineffective, and, at worst, they can promote growth of contaminants that may produce additional problems.
10. Careless use of pesticides and insecticides, as well as cleansing and sanitizing agents, can cause contaminating residues in the milk. Be aware of how and where you use them.

Dairymen must keep drugs out of milk or suffer the consequences. Once antibiotics are present in milk or meat, they cannot be eliminated and there is no use for the product. According to FDA, 78% of the residues found in food-producing animals are due to failure to observe drug withdrawal times. Of these residues, 70% were due to injectables. Withdrawal times are defined as follows:

- (a) Pre-slaughter withdrawal time = the number of days that must pass between last treatment and the day on which an animal may be slaughtered.
- (b) Milk discard times = number of hours between last treatment and when milk may be shipped.

Do you want to get into a situation where you no longer can purchase antibiotics, can't treat your own cattle, and the check for cull cows is delayed until after they have been checked for antibiotic residues? Now is the time to think of keeping antibiotics as a treatment tool while you still have them.

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